IN THE CLAIMS

Please cancel claims 27 and 28.

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously presented) An apparatus comprising:

a guiding enclosure to guide and keep energy from an energy source within the guiding enclosure, the guiding enclosure made of a material reflective of the energy from the energy source, the energy source being an electromagnetic radiation source;

a supporting piece detachably coupled with the guiding enclosure, the supporting piece made of a material transparent to the energy from the energy source; and

an absorbing piece coupled to and supported by the supporting piece within the guiding enclosure, the absorbing piece made of at least one material that absorbs the energy from the energy source and transfers the energy to an object to be heated, a predetermined composition of the absorbing piece controlling an energy absorption rate of the absorbing piece; and

a holder with a top portion contacting a bottom portion of the guiding enclosure to keep the energy from the energy source within the guiding enclosure.

2. (Original) The apparatus of claim 1 wherein the predetermined composition of the absorbing piece includes the absorbing piece made of one material that uniformly absorbs the energy from the energy source.

3. (Original) The apparatus of claim 1 wherein the predetermined composition of the absorbing piece includes more than one material, each material capable of absorbing the energy from the energy source at a different absorption rate.

4. (Previously presented) The apparatus of claim 1 wherein the energy source is a microwave source.

5. (Original) The apparatus of claim 4 wherein the guiding enclosure material is made of metal.

6. (Original) The apparatus of claim 4 wherein the supporting piece material is selected from the group consisting of microwave transparent ceramic and quartz.

7. (Original) The apparatus of claim 4 wherein the absorbing piece material is selected from the group consisting of silicon, carbon doped metal, and microwave absorbing ceramics.

8. (Cancelled)

9. (Previously presented) The apparatus of claim 1 wherein the energy source is an infrared source and the supporting piece material is selected from the group consisting of quartz, potassium bromide, and infrared transparent glass.

10. (Cancelled)

11. (Original) The apparatus of claim 1 wherein the object to be heated includes a plurality of solder joints sandwiched between a substrate and a chip.

12. (Original) The apparatus of claim 11 wherein the object to be heated further includes an underfill material surrounding the solder joints, the solder joints reflowing from the energy before the underfill material is cured by the energy.

13. (Original) The apparatus of claim 12 wherein the object to be heated further includes a material sandwiched between the chip and a heat sink on a side of the chip opposite of a side of the chip facing the substrate.

14. (Original) The apparatus of claim 13 wherein the object to be heated further includes a heat sink sealant material sandwiched between the heat sink and the substrate at two contact points where the heat sink contacts the substrate, the

material cured by the energy before the heat sink sealant material gels from the energy.

15. (Previously presented) The apparatus of claim 14 wherein the object to be heated further includes a material sandwiched between the heat sink and the chip.

16. (Previously presented) An apparatus comprising:

a guide having an internal cavity, an end through which energy from an electromagnetic radiation source can enter the cavity , and a mouth on a side of the cavity opposing the end, the guide being made of a material reflective to the energy so that a majority of the energy is guided to the mouth;

a support piece secured over the mouth and being made of a material through which a first portion of the energy transmits; and

an absorbing piece which absorbs a second portion of the energy through a first surface thereof facing into the cavity to cause heating thereof, the heat being transferred from a second surface thereof against which an object to be heated can be located, the absorbing piece having a predetermined composition that includes more than one material, each material capable of absorbing the energy at a different absorption rate.

17 - 18. (Cancelled)

19. (Previously presented) The apparatus of claim 16 wherein the energy is from a microwave source.

20-25. (Cancelled)

26. (New) An apparatus comprising:

a guiding enclosure to guide and keep energy from an energy source within the guiding enclosure, the guiding enclosure made of a material reflective of the energy from the energy source, the energy source being an electromagnetic radiation source;

a supporting piece detachably coupled with the guiding enclosure, the supporting piece made of a material transparent to the energy from the energy source; and

an absorbing piece coupled to and supported by the supporting piece within the guiding enclosure, the absorbing piece made of at least one material that absorbs the energy from the energy source and transfers the energy to an object to be heated, a predetermined composition of the absorbing piece controlling an energy absorption rate of the holding piece and including more than one material, each material capable of absorbing the energy from the energy source at a different absorption rate.

27-28. (Cancelled)